AMENDEMENTS TO THE SPECIFICATION

Please replace the paragraph beginning on page on page 1 line 31, and ending on page 2 line 6, by the following amended paragraph:

According to the above mentioned object, from a broad aspect of the invention, there is provided a method for estimating an optimal dosage of bleaching agent to be used in a process for producing pulp of a required brightness value from wood chips characterized by a mix of species. The method comprises the step of: i) estimating a set of wood chip properties characterizing said wood chips to generate corresponding wood chip properties data, said set including reflectance-related properties and wood chip size; said method being characterized by further comprising the steps of: ii) providing an initial dosage value of said bleaching agent; and iii) feeding said wood chip properties data and said bleaching agent dosage value at corresponding inputs of a predictive model for generating predicted brightness value of pulp to produce from said wood chips, to estimate the optimal bleaching agent dosage for which said predicted brightness value substantially reaches said required brightness value, wherein the predictive model is based on a proportional relation between the wood chip size and the predicted brightness value, said model ~~estimates~~ estimating the optimal bleaching agent dosage by performing the steps of: a) comparing the brightness predicted value with the required brightness value to generate error data; b) optimizing the bleaching agent dosage value to minimize the error data; and c) repeatedly generating predicted brightness value and performing said steps a) and b) with the optimized bleaching agent dosage value until the predicted brightness value substantially reaches the required brightness value, to estimate said optimal bleaching agent dosage.

Please, replace the paragraph beginning on page 2, line 28, and ending on page 3 line 2, by the following amended paragraph:

According to the same object, from another aspect of the invention there is provided an apparatus for estimating an optimal dosage of bleaching agent to be used in a process for producing pulp of a required brightness value from wood chips characterized by a mix of species. The apparatus comprises means for estimating a set of wood chip properties characterizing said wood chips to generate corresponding wood chip properties data, said set including reflectance-related properties and wood chip size. The apparatus is characterized

by further comprising: data processor means implementing a predictive model receiving at corresponding inputs thereof said wood chip properties data and an initial bleaching agent dosage value for generating predicted brightness value of pulp to produce from said wood chips, to estimate the optimal bleaching agent dosage for which said predicted brightness value substantially reaches said required brightness value, wherein said predictive model is based on a proportional relation between the wood chip size and the predicted brightness value, said model ~~includes~~ including means for comparing the brightness predicted value with the required brightness value to generate error data, and means for optimizing said bleaching agent dosage value to minimize said error data.